

IN THE CLAIMS:

1. An apparatus for measuring current flow through a living body, comprising:  
data acquisition circuitry consisting of a first contact and a second contact to  
5 generate voltage data; and  
a portable data processing unit connected to said data acquisition circuitry to  
process said voltage data to produce current flow data.
2. The apparatus of claim 1 wherein said portable data processing unit includes  
10 acquired data conditioning circuitry to condition a data signal from said first contact  
and said second contact.
3. The apparatus of claim 2 wherein said acquired data conditioning circuitry  
includes an amplifier.  
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4. The apparatus of claim 1 wherein said portable data processing unit includes  
data input interface circuitry.
5. The apparatus of claim 4 further comprising a keypad connected with said data  
20 input interface circuitry.
6. The apparatus of claim 1 further comprising an autonomous power source.
7. The apparatus of claim 1 wherein said portable data processing unit includes  
25 data output interface circuitry.
8. The apparatus of claim 7 further comprising a visual display connected to said  
data output interface circuitry.
- 30 9. The apparatus of claim 7 further comprising a compact removable flash  
memory card connected to said data output interface circuitry.

10. The apparatus of claim 1 wherein said portable data processing unit includes a central processing unit and a memory storing a set of executable programs.

11. The apparatus of claim 10 wherein said memory stores body impedance data  
5 comprised of known body impedances.

12. The memory of claim 11 wherein said known body impedances include estimated impedances.

10 13. The memory of claim 11 wherein said known body impedances include calculated impedance measurements.

14. The apparatus of claim 10 wherein said memory stores a parameter calculator that compares conditioned data with known body impedances to generate data on said  
15 current flow through said living body.

15. The apparatus of claim 10 wherein said memory stores an output module that controls data storage to a removable flash memory.

20 16. The apparatus of claim 10 wherein said memory stores an output module that controls the menu of an LCD display.